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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *01 May 2008*.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-38* is/are pending in the application.
    4a) Of the above claim(s) *33-35* is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-32, 36-38* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on *March 28, 2008* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *13 January 2005*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

Response to Arguments

1.   Applicant's arguments with respect to claims 1-32 have been considered but are

moot in view of the new ground(s) of rejection.

2.   Claims 1, 27, 29 have been amended, claims 33-35 have been cancelled and

claims 36-38 have been added.

3.   Applicants' arguments with respect to claim 11 have been fully considered,

however, claim 11 was addressed on page 17 in the last office action sent to the

Applicants.

4.   The replacement drawings filed on March 28, 2008 are acknowledged.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   **Claims 36, 38** are rejected under 35 U.S.C. 102(e) as being anticipated by Gray,

III et al (US 2002/0150053 A1).

        Regarding claim 36, Gray, III, '053 discloses a system (fig. 2, to fig. 3, fig. 7,

see, the home entertainment system 210, paragraph 0037) comprising: a transmitter

(fig. 7, Transmitter 720 with link layer controller for transmitting multimedia packets,

paragraph 0072), a source of information portions (fig. 3, Multimedia Source 310

comprising of multimedia packets 708, 709, paragraphs 0072, 0053, lines 1-6) that are

to be available at a receiver (fig. 7, Receiver 721, paragraph 0072) at critical times

(noted: relative time that the multimedia packet should be rendered by the receiver,

paragraphs 0076, 0079), and a controller (fig. 7, Transmitter Link Layer Controller 703,

paragraphs 0072, 0076) that is configured to provide select information portions (fig. 7,

fig. 10, the transmitter link layer controller includes the transmitter application time

based in each multimedia packet to be transmitted and then the receiver uses the time

for the rendering of the information in the multimedia packets, paragraphs 0076, 0078,

0090) to the transmitter (fig. 7, Transmitter 720 with link layer controller for transmitting

multimedia packets, paragraph 0072) for transmission to the receiver (fig. 7, Receiver

721, paragraph 0072) depending upon whether the information portions can be

transmitted by the transmitter in time to be made available to the receiver before the

critical time (noted: the multimedia packet time stamp is used to determine what time

the multimedia packets should be transmitted, paragraph 0062, lines 9-11, the

transmitter controller calculates timestamp that represents the relative time that the

information should be rendered by the receiver application, paragraph 0079).

Regarding claim 38, Gray, III, '053 discloses the system (fig. 2, to fig. 3, fig. 7,

see, the home entertainment system 210, paragraph 0037), wherein the controller (fig.

7, Transmitter Link Layer Controller 703, paragraphs 0072, 0076) is configured to

determine whether the information portions can be made available to the receiver

before the critical time depending upon an estimate of time required to decode the

information portions at the receiver (noted: the multimedia packet time stamp is used to

determine what time the multimedia packets should be transmitted, paragraph 0062,

lines 9-11, the transmitter controller calculates timestamp that represents the relative

time that the information should be rendered by the receiver application, paragraph

0079).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating
            obviousness or nonobviousness.

9.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

10.   **Claims 1,9, 17, 29** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Meggers et al (US 6,728,270 B1) in view of Gary, III et al (US 2002/0150053 A1).

   Regarding claim 1, Meggers '270 discloses a method ("method for scheduling

and admission controlling of real-time data", recited in abstract, lines 1-10) comprising:

providing a series of information portions (fig. 5, Incoming packet Stream, recited in col.

12, lines 21-36) to a transmitter ("data packets that admitted sent to packet scheduler",

recited in col. 10, lines 52-62-the scheduler plays the role of the transmitter), the

information portions ("delivery time for each payload data packet", recited in col. 12,

lines 21-36) having critical times ("time stamp and delivery deadline", recited in col. 11,

lines 57-67 and col. 12, lines 1-7) when they need to be available to a receiver ("provide

away for processing to EDF queue with delivery deadline", recited in col. 11, lines 57 –

col. 12, lines 7); estimating ("calculation of delivery time for individual packet payload",

recited in col. 2, lines 60-67 –col. 3, lines 1-7) whether the information portions

("decision means for real-time processing of incoming traffic flow", recited in col. 4, lines

27-38) can be transmitted by the transmitter ("data packets that admitted sent to packet

scheduler", recited in col. 10, lines 52-62-the scheduler plays the role of the transmitter),

in time to be made available to the receiver ("received at network node", recited in col.

6, lines 29-37, "EDF queue", recited in col. 11, lines 57-66) before the critical time

("delivery deadline at the output queue and allowed delivery deadline", recited in col.

12, lines 21-55); and transmitting ("transfer unit to transmit packet that admitted",

recited in col. 4, lines 39-45) the information portions ("sub-stream of data packets",

recited in col. 11, lines 57-66) to the receiver ("EDF queue", recited in col. 11, lines 57-

66) depending on the estimating ("calculated delivery time", recited in col. 12, lines 51-

55).

     Regarding claim 29, Meggers '270 discloses a transmitter ("data packets that

admitted sent to packet scheduler", recited in col. 10, lines 52-62-packet scheduler

plays the role of the transmitter) for transmitting information portions ("sub-stream of

data packets", recited in col. 10, lines 52-62) to a receiver ("output interface and EDF

queue", recited in col. 3, lines 53-60), comprising: means for providing ("admission of

data packets of a substream", recited in col. 10, lines 53-62) a series of information

portions (fig. 1c, "insertion of data packets into a stream", recited in col. 7, lines 6-12)

that need be available to the receiver ("destination entity", recited in col. 8, lines 7-24)

at critical times ("time at which the data has to reach it destination", recited in col. 8,

lines 7-24); means for estimating ("calculation of delivery time for individual packet

payload", recited in col. 2, lines 60-67 –col. 3, lines 1-7) whether the information

portions ("decision means for real-time processing of incoming traffic flow", recited in

col. 4, lines 27-38) can be transmitted by the transmitter ("data packets that admitted

sent to packet scheduler", recited in col. 10, lines 52-62) in time to be made available to

the receiver ("destination entity", recited in col. 8, lines 7-24) before the critical time

("delivery deadline at the output queue and allowed delivery deadline", recited in col.

12, lines 21-55); and transmitting apparatus ("transfer unit to transmit packet that

admitted", recited in col. 4, lines 39-45) to transmit the information portions ("sub-stream

of data packets", recited in col. 11, lines 57-66) to the receiver ("received at network

node", recited in col. 6, lines 29-37 "EDF queue", recited in col. 11, lines 57-66)

depending on the estimating ("calculated delivery time", recited in col. 12, lines 51-55).

Regarding claim 9, Meggers '270 the method ("method for scheduling and

admission controlling of real-time data", recited in abstract, lines 1-10), wherein the

estimating (calculated delivery deadlines", recited in col. 12, lines 37-50) depends on a

buffering limit ("buffer limitations" recited in col. 9, lines 37-42) of the receiver

("receiver's site", recited in col. 9, lines 37-42).

Regarding claim 17, Meggers et al. discloses the method ("method for

scheduling and admission controlling of real-time data", recited in abstract, lines 1-10),

wherein the estimating ("calculation of delivery time for individual packet payload",

recited in col. 2, lines 60-67 –col. 3, lines 1-7) depends on the maximum size

"maximum available throughput", recited in col. 10, lines 24-39) on a information

portions ("substream", recited in col. 10, lines 39-53).

Meggers '270 discloses all the claimed limitation with the exception of being

silent with respect to claimed features:

Regarding claim 1, determining whether to transmit the information portions to

the receiver based on the estimating.

Regarding claim 29, a controller that is configured to determine whether to

transmit the information portions depending on the estimating, transmitting apparatus to

transmit the information portions permitted by the controller to the receiver.

However, Gray, III '053 from the same field of endeavor discloses the above

claimed features:

Regarding claim 1, determining whether to transmit the information portions to

the receiver (fig. 2 to fig. 3, the receiver link layer uses the time stamp to evaluate the

rendering time, paragraph 0032, lines 5-16) based on the estimating (noted: the

multimedia packet time stamp is used to determine what time the multimedia packet

should be transmitted, paragraph 0062, lines 9-11).

Regarding claim 29, a controller (fig. 7, Transmitter Link Layer Controller 703 in

combination with Receiver Controller 705, paragraph 0072, lines 5-13) that is configured

to determine (noted: the multimedia packet time stamp is used to determine what time

the multimedia packet should be transmitted, paragraph 0062, lines 9-11, the

transmitter controller calculates timestamp that represents the relative time that the

information should be rendered by the receiver application, paragraph 0079) whether to

transmit the information portions depending on the estimating (noted: the multimedia

packet time stamp is used to determine what time the multimedia packet should be

transmitted, paragraph 0062, lines 9-11, the transmitter controller calculates timestamp

that represents the relative time that the information should be rendered by the receiver

application, paragraph 0079), transmitting apparatus (fig. 7, fig. 10, the transmitter link

layer controller includes the transmitter application time based in each multimedia

packet to be transmitted and then the receiver uses the time for the rendering of the

information in the multimedia packets, paragraphs 0090, 0076, 0078) to transmit the

information portions (fig. 7, fig. 10, the transmitter link layer controller includes the

transmitter application time based in each multimedia packet to be transmitted and then

the receiver uses the time for the rendering of the information in the multimedia packets,

paragraphs 0090, 0076, 0078) permitted by the controller (fig. 7, Transmitter Link Layer

Controller 703 in combination with Receiver Controller 705, paragraph 0072, lines 5-13)

to the receiver(fig. 7, Receiver Application 706).

In view of the above, it would have been obvious to one of ordinary skill in the art

at the time the invention was made to modify the features of Meggers '270 by using

features as taught by Gary, III '053 in order to provide transmission of real-time of multi-

media information over heterogeneous networks as suggested in paragraphs 0013-

0014.

11.   **Claims 2, 5, 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Meggers et al (US 6,728,270 B1) in view of Gary, III et al (US 2002/0150053 A1) as

applied to claim 1 above, and further view of Cash et al (US 5,481,312).

Meggers '270 and Gary, III '053 disclose all the claimed limitation with the

limitation with the exception of being silent with respect to claimed features:

Regarding claim 2,   the method, wherein the information portions are packets

of media frame portions for a multimedia presentation, the presentation including

multiple frame portions each frame portion including multiple high priority packets and

multiple low priority packets.

Regarding claim 5, the method of claim 1, wherein providing the information

portions includes separating information into information portions having different

priorities.

Regarding claim 24, the method of claim 1, wherein the method further

comprises receiving a request from the receiver to initiate transmitting the information

portions to the receiver.

However, Cash '312 from the same field of endeavor discloses the above

claimed features:

Regarding claim 2,   the method ("method for transmitting video stream from a

transmitter with low and high priority segments", recited in col. 1, lines 40-48), wherein

the information portions ("high and low priority data segments", recited in col. 5, lines

25-53) are packets ("packets of high and low priority", recited in col. 7, lines 1-9) of

media frame portions (fig. 6, I, P and B frame portions, recited in col. 5, lines 9-20) for a

multimedia presentation ("displayed to the client monitor", recited in col. 3, lines 7-42,

fig. 2, Client Monitor 225 and Decoder 224, recited in col. 3, lines 7-42) the presentation

including multiple frame portions (fig. 6, I, P and B frame portions, recited in col. 5, lines

9-20) each frame portion (fig. 3, frame portions with priorities, recited in col. 4, lines 8-

29) including multiple high priority packets ("packets of high and low priority", recited in

col. 7, lines 1-9) and multiple low priority packets ("packets of high and low priority",

recited in col. 7, lines 1-9).

Regarding claim 5, the method ("method for transmitting video stream from a

transmitter with low and high priority segments", recited in col. 1, lines 40-48), wherein

providing the information portions ("transmission of segments with high and low priority",

recited in abstract, lines 1-13) includes separating ("separation", recited in col. 46-54)

information (fig. 6, frame separation, recited in col. 5, lines 9-20) into information

portions ("partitions", recited in col. 3, lines 54-65) having different priorities ("high and

low priority partitions", recited in col. 3, lines 54-65).

Regarding claim 24, The method ("method for transmitting video stream from a

transmitter with low and high priority segments", recited in col. 1, lines 40-48), wherein

the method ("method for transmitting video stream from a transmitter with low and high

priority segments", recited in col. 1, lines 40-48) further comprises receiving a request

("transmitting requested segments to the client", recited in col. 4, lines 35-46) from the

receiver (fig. 2, Client 220, recited in col. 3, lines 7-19) to initiate transmitting

("transmitting requested segments to the client", recited in col. 4, lines 35-46) the

information portions ("transmit of partitions", recited in col. 4, lines 35-46) to the receiver

(fig. 2, Client 220, recited in col. 3, lines 7-19).

In view of the above, it would have been obvious to one of ordinary skill in the art

at the time the invention was made to modify the features of Meggers '270 with Gray, III

'053 by using features as taught by Cash '312 in order to provide differential distribution

of multimedia stream (See col. 1, lines 40-62 for motivation).

12.   **Claims 18, 21-22, 24** are rejected under 35 U.S.C. 103(a) as being unpatentable

over Meggers et al (US 6,728,270 B1) in view of Gary, III et al (US 2002/0150053 A1)

as applied to claim 1 above, and further view of Fukushima et al (US 6,918,077 B2).

Meggers '270 and Gray, III '053 disclose all the claimed limitation with the

exception of being silent with respect to claimed features:

Regarding claim 18, the method, wherein the transmission includes

retransmitting information portions until a predetermined limit on the number of

retransmissions is reached or an acknowledgement is received from the receiver that

the portion has been successfully received without any uncorrectable errors, and the

estimating depends on the retransmission limit.

Regarding claims 21, the method, wherein transmitting the information portions

depends on whether previous information portions were successfully transmitted.

Regarding claims 22 the method, wherein the information portions have

different priorities and transmitting the information portions depends on whether

previous information portions with the same or higher priority were successfully

transmitted.

Regarding claim 24, the method, wherein the method further comprising

receiving a request from the receiver to initiate transmitting the information portions to

the receiver.

However, Fukushima '077 from the same field of endeavor discloses the above

claimed features:

Regarding claim 18, the method ("provide data transmission of real-time", col. 2,

lines 14-18), wherein the transmission (fig. 1, Transmission unit 13, recited in col. 14,

lines 66- col. 15, lines 9) includes retransmitting information portions (fig. 1a,

Retransmission Decision Unit 16, recited in col. 15, , lines 18-34) until a predetermined

limit ("retransmission count", recited in col. 25, lines 30-48) on the number of

retransmissions ("retransmission times", recited in col. 14, lines 35-42) is reached or an

acknowledgement is received ("" retransmission request", recited in col. 17, lines 3-19)

from the receiver (fig. 2, Receiving Unit 21, recited in col. 15, lines 54-65) that the

portion has been successfully received without any uncorrectable errors ("relaying data

that are successively transmitted", recited in col. 5, lines 30-45), and the estimating

depends on the retransmission limit ("retransmission count", recited in col. 25, lines 30-

48).

      Regarding claim 21, the method ("provide data transmission of real-time", col. 2,

lines 14-18), wherein transmitting (fig. 1, Transmission unit 13, recited in col. 14, lines

66- col. 15, lines 9) the information portions ("data units", recited in col. 15, lines 10-

178) depends on whether previous information portions were successfully transmitted

(when the I frame becomes an error, video frames of P and B cannot be reproduced",

recited in col. 14, lines 6-25).

      Regarding claim 22, the method ("data transmission apparatus", recited in col.

2, lines 26-33), wherein the information portions ("packet units", recited in col. 15, lines

44-53) have different priorities ("lower and higher priorities", recited in fig. 6, col. 18,

lines 63- col. 19, lines 5)and transmitting (fig. 1, Transmission unit 13, recited in col. 14,

lines 66- col. 15, lines 9) the information portions ("data units", recited in col. 15, lines

10-178) depends on whether previous information portions ("frame portions", recited in

col. 17, lines 48-58) with the same or higher priority ("high priority packets", recited in

col. 17, lines 48-58) were successfully transmitted ("retransmission of packet with

priorities higher than predetermined value", recited in col. 14, lines 51-59).

Regarding claim 24, the method ("provide data transmission of real-time", col. 2,

lines 14-18), wherein the method ("provide data transmission of real-time", col. 2, lines

14-18) further comprising receiving a request ("retransmission request from terminal at

receiving end", recited in col. 3, lines 50-62) from the receiver (fig. 2, Receiving Unit 21,

recited in col. 15, lines 54-65) to initiate transmitting the information portions

("transmitted from the transmitter comprising of audio, video, text and header section",

recited in col. 15, lines 10-17) to the receiver (fig. 2, Receiving Unit 21, recited in col. 15,

lines 54-65).

In view of the above, it would have been obvious to one of ordinary skill in the art

at the time the invention was made to modify the features of Meggers 270 with Gray, III

'053 by using features as taught by Fukushima '077 in order to provide improvement in

transmission quality as suggested in col. 2, lines 26-53 for motivation.

13.   **Claims 2-4, 6-8, 10-11, 12-17, 19-26** are rejected under 35 U.S.C. 103(a) as

being unpatentable over Meggers et al (US 6,728,270 B1) in view of Gary, III et al (US

2002/0150053 A1) as applied to claim 1 above, and further view of Delp et al (US

6,028,843), Walpole et al (US 2003/0236904 A1).

Regarding claim 8,   Meggers '270 discloses the method, wherein the

estimating ("calculation of delivery time for individual packet payload", recited in col. 2,

lines 60-67 –col. 3, lines 1-7), determining ("calculated delivery time", recited in col. 12,

lines 51-55) an estimated transfer time ("transmission time", recited in col. 8, lines 7-18)

for transmitting ("transfer unit to transmit packet that admitted", recited in col. 4, lines

39-45) the information portion ("payload data packets", recited in col. 7, lines 1-5) and

making the information portion ("payload data packets", recited in col. 7, lines 1-5)

available to the receiver ("data packets reaching the destination at time interval",

recited in col. 6, lines 38-47).

Regarding claim 13, Meggers '270 discloses the method , wherein the

estimating ("calculation of delivery time for individual packet payload", recited in col. 2,

lines 60-67 –col. 3, lines 1-7) depends ("depends on throughput requirement", recited in

col. 3, lines 14-25) on a type of media frame of the packet ("video frames, HTML",

recited in col. 6, lines 48-57).

Regarding claim 15, Meggers '270 discloses the estimating ("calculation of

delivery time for individual packet payload", recited in col. 2, lines 60-67 –col. 3, lines 1-

7) depends on the media frame portions ("video frames, HTML", recited in col. 6, lines

48-57) of the information portion("payload data packets", recited in col. 7, lines 1-5) to

be transmitted ("transfer unit to transmit packet that admitted", recited in col. 4, lines 39-

45).

Regarding claim 19, Meggers '270 discloses the method, wherein the

estimating ("calculation of delivery time for individual packet payload", recited in col. 2,

lines 60-67 –col. 3, lines 1-7), determining ("calculated delivery time", recited in col. 12,

lines 51-55) an estimated transfer time ("transmission time", recited in col. 8, lines 7-18).

Regarding claims 25-26, Meggers '270 discloses the method, wherein the estimating("calculation of delivery time for individual packet payload", recited in col. 2, lines 60-67 –col. 3, lines 1-7) includes multiple estimations ("calculation of delivery deadlines", recited in col. 8, lines 50-62), multiple estimations ("calculation of delivery deadlines", recited in col. 8, lines 50-62) during transmission of packets of a frame portion ("video frames, HTML", recited in col. 6, lines 48-57), whether all the packets can be transmitted by the transmitter in time to be made available to the receiver before the critical time (See paragraphs above), and the transmitting depends on the multiple estimations ("calculation of delivery deadlines", recited in col. 8, lines 50-62).

Meggers '270 and Gray, III '053 disclose all the claimed limitation with the exception of being silent with respect to claimed features:

Regarding claim 2, the method, wherein the information portions are packets of media frame portions for a multimedia presentation, the presentation including multiple frame portions each frame portion including multiple high priority packets and multiple low priority packets.

Regarding claim 3, the method wherein the multiple frame portions each have a decoding time before which all the high priority packets of the frame portion need to be available to the receiver to decode the frame portion in time for presentation at a predetermined presentation time of the frame portion, the decoding time and presentation time being relative to a playing time of the presentation.

Regarding claim 4, the method, wherein the low priority packets are used to enhance the frame portion during decoding when some but not all of the low priority packets are not available to the receiver at the critical time.

Regarding claim 6, the method, in which providing the information portions includes providing media frame portions and partitioning each frame portion into high priority information portions that are necessary to decode the frame portion and low priority information portions that are only needed to enhance the frame portions.

Regarding claim 7, the method of claim 1, wherein the information portions include high priority and low priority packets of media frame portions and all the high priority packets for one frame portion are provided before any low priority packets for the frame portion are provided.

Regarding claim 10, the method, wherein the receiver transmits an indication of the buffering limit to the transmitter.

Regarding claim 11, the method, wherein the estimating depends on a priority of the information portion being transmitted.

Regarding claim 13, the method, wherein the information portions are packets of media frame portions.

Regarding claim 14, the method, wherein: the information portions are portions of a video presentation encoded based on a group of pictures of different types of video frames including I-frames that are decoded independent of the decoding of any other frame, and P-frames that are decoded based on the decoding of the previous I or P-

frame, and B-frames that are decoded based in the previous and the following I or P-

frame; and the target time depends on the type of video frame.

Regarding claim 15, the method, wherein the information portions are packets

of media frame portions and the estimating depends on a decoding time of the media

frame portion of the information portion to be transmitted.

Regarding claim 19, previously transmitted information.

Regarding claim 25, for all packets of the frame portion so that when it is

estimated that some of the packets for the frame portions will be transmitted in time

then the remaining packets for the frame portion are not transmitted.

Regarding claim 26, the transmitting of packets of the same or lower priority

depends on the multiple estimations for all the packets of the frame portion of the

priority so that when it is estimated that it is likely that some of the packets for the frame

portion of the priority will not be transmitted in time, then the remaining packets for the

frame portion for the same or lower priority are not transmitted.

However, Walpole '904 from the same field of endeavor discloses the above

claimed features:

Regarding claim 2, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10) , wherein the

information portions (fig. 2, "stream of data units", recited in paragraph 0051) are

packets ("multimedia packets", recited in paragraph 0020) of media frame portions (fig.

3, Frame Portions, recited in paragraph 0057) for a multimedia presentation

("multimedia presentation", recited in paragraph 0020), the presentation ("multimedia

presentation", recited in paragraph 0020), including multiple frame portions (fig. 3,

Frame Portions, recited in paragraph 0057) each frame portion including multiple high

priority packets ("priority packets", recited in paragraph 0021, fig. 3, High Priority,

recited in paragraphs 0061-0062) and multiple low priority packets ("priority packets",

recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062).

Regarding claim 3, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the

multiple frame portions (fig. 2, "stream of data units", recited in paragraph 0051) each

have a decoding time (fig. 5-6, Play Time Window", recited in paragraph 0066), before

which all the high priority packets ("priority packets", recited in paragraph 0021, fig. 3,

High Priority, recited in paragraphs 0061-0062) of the frame portion need to be available

to the receiver (fig. 1, Client-side media decoder, recited in paragraph 0053) to decode

(fig. 1, Media Decoder 148, recited in paragraph 0053) the frame portion in time ("SDU

stream data units flown to decoder based on timestamps", recited in paragraph 0072)

for presentation ("multimedia presentation", recited in paragraph 0020), at a

predetermined presentation time (fig. 5-6, Play Time Window", recited in paragraph

0066) of the frame portion (fig. 5-6, "High to box 162", recited in paragraph 0068), the

decoding time ("time unit", recited in paragraph 0068) and presentation time ("regulating

the flow of stream data unit in relation to presentation time/playback time", recited in

paragraphs 0079) being relative to a playing time (fig. 5-6, Play Time Window", recited

in paragraph 0066) of the presentation ("multimedia presentation", recited in paragraph

0020).

Regarding claim 4, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the low

priority packets ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited

in paragraph 0061-0062) are used to enhance ("impact on the video quality-B frames",

recited in paragraph 0063, lines 1-11) the frame portion ("stream data units or SDU",

recited in paragraph 0079) during decoding when some but not all of the low priority

packets ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited in

paragraph 0061-0062) are not available ("can not be decode unless previous is

present", recited in paragraph 0059-0060) to the receiver (fig. 19, Client 406, recited in

paragraph 0218) at the critical time ("timeline presentation" , recited in paragraph

0079).

Regarding claim 6, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), in which

providing ("providing of multimedia", recited in paragraph 0045) the information portions

("multiple segments of information", recited in paragraph 0066, lines 10-19) includes

providing ("providing of multimedia", recited in paragraph 0045) media frame portions

("multiple frames of video information", recited in paragraph 0066) and partitioning (fig.

12-13, partitioning of SPEG data, recited in paragraphs 0087-0088) each frame portion

(fig. 2, Media Segment,   recited in paragraph 0051) into high priority ("priority packets",

recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062)

information portions (fig. 1, QoS Mapper and Priority Progress Streamer, "assigns of

priority", recited in paragraph 0049) that are necessary to decode (fig. 1, Client-side

media decoder, recited in paragraph 0053) the frame portion (fig. 2, Media Segment,

recited in paragraph 0051) and low priority information portions ("priority packets",

recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) that are

only needed to enhance ("impact on the video quality-B frames", recited in paragraph

0063, lines 1-11) the frame portions ("stream data units or SDU", recited in paragraph

0079).

  Regarding claim 7, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the

information portions ("multiple segments of information", recited in paragraph 0066,

lines 10-19) include high priority ("priority packets", recited in paragraph 0021, fig. 3,

High Priority, recited in paragraphs 0061-0062) and low priority packets ("priority

packets", recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062)

of media frame portions ("multiple frames of video information", recited in paragraph

0066) and all the high priority packets ("priority packets", recited in paragraph 0021,

fig. 3, High Priority, recited in paragraphs 0061-0062) for one frame portion ("SDU

stream data units flown to decoder based on timestamps", recited in paragraph 0072)

are provided before ("priority of stream data units", recited in paragraph 0067) any low

priority packets ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited

in paragraph 0061-0062) for the frame portion are provided ("SDU stream data units

flown to decoder based on timestamps", recited in paragraph 0072).

  Regarding claim 10, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the

receiver (fig. 4, Downstream adaptation buffer 184, recited in paragraph 0064) transmits

("receiving timing feedback from", recited in paragraph 0064) an indication ("receiving

timing feedback from", recited in paragraph 0064) of the buffering limit ("receiving

timing feedback", recited in paragraph 0064) to the transmitter (fig. 4, Upstream

Adaptation Buffer 182, recited in paragraph 0064/Progress Streamer/progress

regulator).

Regarding claim 11, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the

estimating depends on a priority of the information portion being transmitted ("priority

progress media-streaming that provides quality-adaptive transmission", recited in

abstract, lines 1-10).

Regarding claim 13, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the

information portions ("multiple segments of information", recited in paragraph 0066,

lines 10-19) are packets of media frame portions ("multiple frames of video information",

recited in paragraph 0066).

Regarding claim 14, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein: the

information portions (fig. 2, "stream of data units", recited in paragraph 0051) are

portions of a video presentation ("video presentation", recited in paragraph 0020)

encoded based on a group of pictures (fig. 3, MPEG group of pictures", recited in

paragraph 0057) of different types of video frames (fig. 3, MPEG video frames, recited

in paragraph 0058) including I-frames (fig. 3, I Frames, recited in paragraph 0058-0062)

are decoded independent of the decoding of any other frame (fig. 3, I Frames that can

be decoded independently", recited in paragraphs 0058-0062), and P-frames (fig. 3, P

Frames, recited in paragraph 0058-0062) that are decoded based on the decoding of

the previous I or P-frame ("depends on previous I or P frames", recited in paragraph

0059), and B-frames (fig. 3, B Frames, recited in paragraphs 0058-0062) that are

decoded based in the previous and the following I or P-frame ("depends on previous I or

P frames", recited in paragraph 0060); and the target time (fig. 5-6, Play Time Window",

recited in paragraph 0066) depends on the type of video frame ("SDU stream data units

flown to decoder based on timestamps", recited in paragraph 0072).

Regarding claim 15, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the

information portions ("multiple segments of information", recited in paragraph 0066,

lines 10-19) are packets of media frame portions (fig. 3, MPEG video frames, recited in

paragraph 0058), a decoding time ("media decoder and time stamp", recited in

paragraph 0072) of the media frame portion ("multiple frames of video information",

recited in paragraph 0066) of the information portion to be transmitted (see, "depends

on relationships between the various frame portions, recited in paragraphs 0058-0062).

Regarding claim 16, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the

information portions ("multiple segments of information", recited in paragraph 0066,

lines 10-19) are packets of media frame portions ("stream data units", recited in

paragraph 0051) of a presentation ("multimedia presentation", recited in paragraph

0020), multiple media frame portions ("multiple frames of video information", recited in

paragraph 0066) each having a decoding time (fig. Time Stamp, recited in paragraph

0051) when packets of the frame portion have to be available at a decoder (fig. 1,

Media Decoder 148, recited in paragraph 0053) of the receiver (fig. 1, Client-side,

recited in paragraph 0053) for decoding in time ("SDU stream data units flown to

decoder based on timestamps", recited in paragraph 0072) for presentation at a

predetermined presentation time (fig. 5-6, Play Time Window", recited in paragraph

0066) of the frame portion ("SDU stream data units flown to decoder based on

timestamps", recited in paragraph 0072).

Regarding claim 19, previously transmitted information portions (see, "depends

on relationships between the various frame portions, recited in paragraphs 0058-0062).

Regarding claim 20, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the

information portions ("multiple segments of information", recited in paragraph 0066,

lines 10-19) are high priority ("priority packets", recited in paragraph 0021, fig. 3, High

Priority, recited in paragraphs 0061-0062) and low priority packets ("priority packets",

recited in paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) of media

frame portions and transmitting all the high priority packets ("priority packets", recited in

paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) for one frame

portion begins before the beginning of transmitting the low priority packets for the frame

portion ("priority packets", recited in paragraph 0021, fig.3, Low Priority, recited in

paragraph 0061-0062).

Regarding claim 21, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein

transmitting ("Priority Progress Streamer sending stream data units", recited in

paragraph 0050) the information portions ("multiple segments of information", recited in

paragraph 0066, lines 10-19) depends on whether previous information portions were

successfully transmitted ("multiple segments of information", recited in paragraph 0066,

lines 10-19).

Regarding claim 22, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the

information portions ("multiple segments of information", recited in paragraph 0066,

lines 10-19) have different priorities (fig. 5-6, Low, High and Medium priorities, recited in

paragraph 0066) and transmitting ("Priority Progress Streamer sending stream data

units", recited in paragraph 0050) the information portions ("multiple segments of

information", recited in paragraph 0066, lines 10-19) depends on whether previous

(see, "depends on relationships between the various frame portions, recited in

paragraphs 0058-0062) information portions ("multiple segments of information", recited

in paragraph 0066, lines 10-19) with the same or higher priority ("priority packets",

recited in paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) were

successfully transmitted ("priority packets", recited in paragraph 0021, fig. 3, High

Priority, recited in paragraphs 0061-0062).

     Regarding claim 23, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the

information portions ("multiple segments of information", recited in paragraph 0066,

lines 10-19) are high priority and low priority packets ("priority packets", recited in

paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) of media frame

portions and transmitting the high priority packets ("priority packets", recited in

paragraph 0021, fig. 3, High Priority, recited in paragraphs 0061-0062) depends on

whether previous high priority packets ("priority packets", recited in paragraph 0021, fig.

3, High Priority, recited in paragraphs 0061-0062) for the same frame portion have been

transmitted and transmitting the low priority packets ("priority packets", recited in

paragraph 0021, fig.3, Low Priority, recited in paragraph 0061-0062) depends on

whether previous high priority ("priority packets", recited in paragraph 0021, fig. 3, High

Priority, recited in paragraphs 0061-0062) and previous low priority packets for the

same frame portion have been transmitted (see, "depends on relationships between

the various frame portions, recited in paragraphs 0058-0062).

     Regarding claim 26, the method ("priority progress media-streaming that

provides quality-adaptive transmission", recited in abstract, lines 1-10), wherein the

information portions ("multiple segments of information", recited in paragraph 0066,

lines 10-19) for a frame include information portions ("multiple segments of

information", recited in paragraph 0066, lines 10-19) having different priorities (fig. 5-6,

Low, High and Medium priorities, recited in paragraph 0066).

Regarding claim 25, for all packets of the frame portion (fig. 3, MPEG video

frames, recited in paragraph 0058), so that when it is estimated that some of the

packets for the frame portions will be transmitted in time then the remaining packets for

the frame portion are not transmitted (See "frame depends-on relations in MPEG",

recited in paragraphs 0058-0062).

Regarding claim 26, the transmitting of packets of the same or lower priority

depends on the multiple estimations for all the packets of the frame portion of the

priority so that when it is estimated that it is likely that some of the packets for the frame

portion of the priority will not be transmitted in time, then the remaining packets for the

frame portion for the same or lower priority are not transmitted (See "frame depends-on

relations in MPEG", recited in paragraphs 0058-0062).

In view of the above, it would have been obvious to one of ordinary skill in the art

at the time the invention was made to modify the features of Meggers '270 with Gray, III

'053 by using features as taught by Walpole '904 in order to provide quality-adaptive

transmission of multimedia data as suggested in paragraphs 0019-0020.

Meggers '270, Gray, III 053 and Walpole '904 disclose all the claimed limitation

with the exception of being silent with respect to claimed features:

Regarding claim 8, wherein: the estimating includes determining a target time

when one information portion needs to be available to the receiver and determining an

estimated transfer time for transmitting the information portion and making the

information portion available to the receiver, the estimating includes determining

whether the target time exceeds the sum of the estimated transfer time plus the current

time of the transmission; and the information portion is transmitted depending on the

determination.

Regarding claim 12, the target time depends on a predetermined delay

tolerance that is larger for the high priority packets than for the low priority packets so

that the high priority packets are more likely to be received by the receiver than the low

priority packets.

However, Delp '843 from the same field of endeavor discloses the following

features:

Regarding claim 8, the method ("method for scheduling", recited in col. 4, lines

60-67), wherein: the estimating includes determining a target time ("calculation of target

transmission time", recited in col. 5, lines 1-14) when one information portion ("data

streams", recited in col. 5, lines 1-14) needs to be available to the receiver (fig. 1,

Outbound Cell Scheduler 102, recited in col. 6, lines 30-55) and determining an

estimated transfer time ("calculation of time slot", recited in col. 5, lines 8-14) for

transmitting the information portion ("transmission of data cell", recited in col. 5, lines

22-27) and making the information portion ("transmission of data streams at the earliest

deadlines", recited in col. 5, lines 1-14) available to the receiver (fig. 1, Outbound Cell

Scheduler 102, recited in col. 6, lines 30-55), the estimating ("computing deadlines for

the connections", recited in col. 7, lines 34-46) includes determining ("calculation of

target transmission time", recited in col. 5, lines 1-14) whether the target time exceeds

("comparing time slot", recited in col. 5, lines 22-38) the sum of the estimated transfer

time plus the current time of the transmission ("old timestamp, current time stamp and

time slot calculation", recited in col. 11, lines 1-23); and the information portion ("data

streams", recited in col. 5, lines 1-14) is transmitted ("transmission of packets at the

deadline", recited in col. 7, lines 57-62) depending on the determination ("computing

deadlines for the connections", recited in col. 7, lines 34-46).

Regarding claim 12, the target time ("calculation of target transmission time",

recited in col. 5, lines 1-14) depends on a predetermined delay tolerance (fig. 2B, MAX

Delay 230, recited in col. 8, lines 25-35, "guaranteed delay', recited in col. 9, lines 5-13)

that is larger ("maximum delay", recited in col. 11, lines 1-22) for the high priority

packets ("classification of connections by delay bounds", recited in col. 4, lines 60-65,

"data are processed according to the timing wheel priority", recited in col. 12, lines 23-

56) than for the low priority packets ("data are processed according to the timing wheel

priority", recited in col. 12, lines 23-56) so that the high priority packets are more likely to

be received by the receiver (fig. 1, Outbound Cell Scheduler 102, recited in col. 6, lines

30-55), than the low priority packets (fig. 9, Priority levels of cell scheduler, recited in

col. 11, lines 40-60).

In view of the above, it would have been obvious to one of ordinary skill in the art

at the time the invention was made to modify the features of Meggers '270 with Gray, III

053 with Walpole '904 by using features as taught by Delp 843 in order to provide

scheduling of data streams at earliest delivery deadlines as suggested in col. 4, lines

60-65.

14.   **Claims 30-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Meggers et al (US 6,728,270 B1) in view of Gray, III et al (US 2002/0150053 A1) as

applied to claim 29 above, and further view of Walpole et al (US 2003/0236904 A1).

Meggers '270 and Gray, III '053 disclose all the claimed limitation with the

exception of being silent with respect to claimed features:

Regarding claim 30, the transmitter further comprises means for receiving an

indication of the size of buffering from the receiver; and the estimating depends on the

indication of the size of buffering in the receiver.

Regarding claim 31, the transmitter further comprises means for determining a

decoding time of the information portions.

Regarding claim 32, the means for providing information portions includes

means for partitioning information into information portions having different priorities;

and the estimating depends on the priorities of the information portions.

However, Walpole '904 from the same field of endeavor discloses the above

claimed features:

Regarding claim 30, the transmitter (fig. 1, Server Streaming side 102, recited in

paragraph 0047, fig. 4, Upstream Adaptation Buffer 182, recited in paragraph 0064)

further comprises means for receiving an indication ("timing feedback", recited in

paragraph 0064) of the size ("timing feedback", recited in paragraph 0064) of buffering

from the receiver (fig. 4, Downstream adaptation buffer 184, recited in paragraph 0064,

fig. 19, Client 406, recited in paragraph 0218 or Client-side 104, recited in paragraph

0047).

Regarding claim 31, the transmitter (fig. 1, Server Streaming side 102, recited in

paragraph 0047, fig. 4, Upstream Adaptation Buffer 182, recited in paragraph 0064)

further comprises means for determining ("QoS mapper determines", recited in

paragraph 0109, 0104-0105)a decoding time (fig. 2, Time Stamp, recited in paragraph

0051) of the information portions ("multiple segments of information", recited in

paragraph 0066, lines 10-19).

Regarding claim 32, the means ("providing of multimedia", recited in paragraph

0045) for providing information portions ("multiple segments of information", recited in

paragraph 0066, lines 10-19) includes means for partitioning information(fig. 12-13,

partitioning of SPEG data, recited in paragraphs 0087-0088) into information portions

("multiple segments of information", recited in paragraph 0066, lines 10-19) having

different priorities (fig. 5-6, Low, High and Medium priorities, recited in paragraph 0066).

In view of the above, it would have been obvious to one of ordinary skill in the art at the

time the information was made to modify the features of Meggers '270 with Gray, III

'053 by using features as taught by Walpole '904 in order to provide quality-adaptive

transmission of multimedia data as suggested in paragraphs 0019-0020.

15.   **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over Walpole

et al (US 2003/0236904 A1) in view of Fukushima et al (US 6,918,077 B2).

Regarding claim 27, Walpole '904 discloses a method ("priority progress media-

streaming that provides quality-adaptive transmission", recited in abstract, lines 1-10)

comprising: separating (fig. 12-13, Partitioning of MPEG data, recited in paragraph

0087-0088) for a performance ("multimedia presentation", recited in paragraph 0020,

"video presentation", recited in paragraph 0020) into multiple media streams ("multiple

frames of video information", recited in paragraph 0066) with different priorities (fig. 5-6,

Low, High and Medium priorities, recited in paragraph 0066) for transmission ("data

transmissions", recited in paragraph 0219) over a network (fig. 19, Network, recited in

paragraph 0214) having a variable conditions ("dynamic variations and network loads",

recited in paragraph 0208), the media stream (fig. 2, Application data unit with Time slot

assigned, recited in paragraph 0051) having a predetermined schedule ("predefined

time period", recited in paragraph 0051); determining (fig. 1, QoS Mapper

114,"performs dynamic quality of service as part of media stream delivery", recited in

paragraph 0104-0105, " "computing QoS presentation", recited in paragraph 0108, lines

1-7) whether to transmit portions ("multiple segments of information", recited in

paragraph 0066, lines 10-19) of the multiple media streams ("multiple frames of video

information", recited in paragraph 0066) depending on the priorities (fig. 5-6, Low, High

and Medium priorities, recited in paragraph 0066) and on the network (fig. 19, Network,

recited in paragraph 0214) conditions ("dynamic variations and network loads", recited

in paragraph 0208), so that the perceived quality ("quality of adaptation vary to

accommodate clients", recited in paragraph 0055) of the performance ("multimedia

presentation", recited in paragraph 0020) is increased relative ("manipulation of

adaptation window for stable quality", recited in paragraph 0082) to attempting to

transmit all of the multiple media streams ("multiple frames of video information", recited

in paragraph 0066); and transmitting the portions ("multiple segments of information",

recited in paragraph 0066, lines 10-19) of the multiple media streams ("multiple frames

of video information", recited in paragraph 0066) depending on the determination (fig.

1, QoS Mapper 114,"performs dynamic quality of service as part of media stream

delivery", recited in paragraph 0104-0105, "computing QoS presentation", recited in

paragraph 0108, lines 1-7).

Walpole '904 discloses all the claimed limitation with the exception of being silent

with respect to claimed features: a time that each stream is required to be received,

and a tolerance related to the time based on priorities.

However, Fukushima '077 from the same field of endeavor discloses the above

claimed features: a time that each stream is required to be received (noted: receiving

data transmitted from the transmitting side, where each packet having information

relating to its sequence number, priority, and data production time at the receiving end,

col. 5, lines 65 to col. 6, lines 5), and a tolerance related to the time based on priorities

(Noted: arrival time limit based on the packet allowable packet delay time, col. 5, lines

6-13, noted: receiving unit for receiving packets, priority decision unit for deciding

priority of each received packet, col. 5, lines 31-38).

In view of the above, having the system for providing quality-adaptive

transmission of multi-media data of Walpole '904 and the data transmission apparatus

comprising of a receiving and transmitting unit for reproducing the packet according to

the priority and reproduction time of Fukushima '077, it would have been obvious to one

of ordinary skill in the art at the time the invention was made to modify the features of

Walpole '904 by using features as taught by Fukushima '077 in order to provide

improvement in transmission quality as suggested in col. 2, lines 26-53 for motivation.

16.   **Claim 28** is rejected under 35 U.S.C. 103(a) as being unpatentable over

Walpole et al (US 2003/0236904 A1) in view Fukushima et al (US 6,918,077 B2) as

applied to claim 27 above, and further view of Chen et al (US 6,658,019 B1).

Regarding claim 28, Walpole '904 and Fukushima '077 disclose all the claimed

limitation with the exception of being silent with regard to claimed features: the method,

wherein the network is a wireless network and packets are transmitted serially, and

each packet is transmitted and retransmitted until an acknowledgement is received or a

retransmission limit is reached.

However, Chen '019 from the same field of endeavor of endeavor discloses the

above claimed features:

Regarding claim 28, the method ("wireless transmission method for transmitting

video stream", recited in abstract, lines 1-7) wherein the network is a wireless network

(fig. 1, Wireless Network, recited in col. 2, lines 14-21) and packets are transmitted

serially ("transmission of video stream", recited in col. 2, lines 14-21), and each packet

is transmitted ("ARQ of sensitive video data", recited in col. 2, lines 25-40) and

retransmitted (fig. 1, Video Stream Rescheduling S3, recited in col. 2, lines 14-21) until

an acknowledgement is received or a retransmission (limit is reached ("maximum

retransmission limit", recited in col. 3, lines 6-28).

In view of the above, it would been obvious to one of ordinary skill in the art at

the time the invention was made to modify the features of Walpole '904 with Fukushima

'077 by using features as taught by Chen 019 in order to provide error protection for

time sensitive data as suggested in col. 1, lines 41-55 for motivation.

17.   **Claim 37** is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray, III

et al (US 2002/0150053 A1) in view of Walpole et al (US 2003/0236904 A1).

    Regarding claim 37, Gray, III '053 discloses the system along with the receiving

device as discussed in above paragraph.

    Gray, III 053 is silent with respect to claimed features: a receiving device that is

configured to receive information from the receiver regarding a size of a receiving buffer

at the receiver; wherein the controller is configured to determine whether the information

portions can be made available to the receiver before the critical time depending upon

the size of the receiving buffer.

    However, Walpole '904 from the same field of endeavor discloses the above

claimed features:

    a receiving device (fig. 1, Server Streaming side 102, recited in paragraph 0047,

fig. 4, Upstream Adaptation Buffer 182, recited in paragraph 0064) that is configured to

receive information (Noted: timing feedback with respect to resource limitations, recited

in paragraph 0064) from the receiver regarding a size (Noted: timing feedback with

respect to resource limitations, recited in paragraph 0064) of a receiving buffer at the

receiver (fig. 4, Downstream adaptation buffer 184, recited in paragraph 0064, fig. 19,

Client 406, recited in paragraph 0218 or Client-side 104, recited in paragraph 0047);

wherein the controller (fig. 4, Progress Regulator 188, paragraph 0064) is configured to

determine whether the information portions can be made available to the receiver

before the critical time depending upon the size of the receiving buffer (noted: the

Progress Regulator 188 regulates the flow of SDU/Service Data Units in relation to the

presentation time and play time, paragraphs, 0045, 0079).

In view of the above, having the method and system for distributing of multimedia

data of Gray, III and the well-established teaching for matching the resource

requirements of the data-streaming system to the capabilities of the clients of Walpole

'904, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the features of Gray, III '053 by using features of Walpole

'904 in order to transmit the streaming data according to the capabilities of the clients as

suggested in paragraphs 0019, lines 1-9, 0045.

Conclusion

18.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Gu et al (US 7,253,831 B2), Ariel et al (US 2002/0146074 A1),

Delp et al (US 5,844,890), Branstad et al (US 5,537,408), Walpole et al (US

2003/0233464 A1), Tan et al (US 6,917,984 B1) are cited to show methods and

systems related to the claimed invention.

19.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CANDAL ELPENORD whose telephone number is

(571)270-3123. The examiner can normally be reached on Monday through Friday

7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

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